



THE SPARK

APRIL-MAY EDITION 2014

Welcome New Recruits!

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On March 5, 2014, the City of Durham proudly pinned badges on five new fire-fighters. For the first time ever, the ceremony was held in conjunction with Morrisville Fire Department who had two recruits to graduate from this academy. The academy lasted 30 weeks and all recruits emerged as RIT and EMT-I Certified. Pictured are Anthony Cantor, Marcel Collymore, Kyle Hunnings, David Ingram, and Trent Lucas.



Also joining our ranks in late April 2014 are Durham Tech Academy recruits Justin Haught and Darius Thompson.

In This Issue

Chiefs Columns pgs. 2-4
Techbytes from Michael Greitzer pg.5
Welcome Donnie pg.5
Melvin Wins Award pg. 6

Haz Mat Update pg. 8
Chaplains Corner pg.10
Griff cartoon pg. 11
Kington House Burn Pics pg.12

From the Desk of Fire Chief Curia



Normalization of Deviance

For this issue of the Spark, I want to review a concept known as the "normalization of deviance." This occurs when an individual feels pressure to take a short cut that then jeopardizes safety. The reason for the short-cut can vary; however, it can often be linked to an internal justification that the need for action supersedes established procedures. Once

the short cut is taken, the new behavior is then normalized into the individual's judgment process. If there are no negative consequences when the individual takes the short cut, the learned behavior is that the previous definition of "safe behavior" was flawed and that the new, less-safe behavior can now be the standard. In this instance, deviation of normal behavior occurred and the "new normal" is the altered state; hence, there was a normalization of deviance.

The normalization of deviance concept, to the best of my knowledge, was formalized after the space shuttle Challenger disaster in 1986 and reported by Astronaut Mike Mullane in his book Riding Rockets. The condition that led to the destruction of the shuttle, defective o-rings in the solid rocket boosters, was both well-known and well-documented by NASA engineers prior to the disaster. When the shuttle was launched during periods of freezing temperatures, engineers warned, there was the possibility that the o-rings would crack and then fail as they were rapidly heated. After the issue was identified, a solution was not acted upon. At the time, the NASA culture was such that since there was not a previous disaster as a result of defective parts, there was no indication that there would not be a future disaster. In this case, their behavior deviated to the point that known safety issues were not weighed properly in the judgment process. After the Challenger disaster, the NASA culture was one factor identified for change. Even with massive efforts to modify behavior within the organization, a similar issue contributed to the space shuttle Columbia disaster in 2003.

How does this concept apply to the Durham Fire Department? We can all look at our operations and, after honest reflection, admit that there are normalizations of deviance on many fronts. In fact, one of the prime movers for the restructuring of the Special Operations Division was to identify, solve, and prevent normalization of deviance issues. Ask yourself these questions -- Have you neglected to wear your seatbelt on the way to a structure fire because 1) you needed to get there quickly and 2) you needed to don your turnout

gear? Over time, did that become a normal practice? If so, did the need for action supersede safe behavior? Have you ever disregarded 2 in/2 out because you feel the need to initiate immediate action at a structure fire? Do you wear proper PPE when checking the saws? As we all know, the list could go on. Here is what I ask of each of us -- please assess your behavior and determine if there are normalizations of deviance that have occurred over time. If you identify some, commit to yourself, to your fellow firefighters, and to our department that you will modify behaviors back to the original "normal." Wear your PPE properly, govern your responses accordingly, and make sure that your daily effort aligns with the organization's expectations. If we all work to identify flaws in the department and then honestly work to reverse the "normalization of deviance," there is no limit to what we can do.

Thank you for taking the time to read these thoughts. As always, please stop by the office for a quick "hello" when you are at Admin. Keep up the good work and stay safe.

From the Desk of Deputy Chief Iannuzzi

Straight from the horse's mouth

Many of you know that I am writing a research paper on ways to increase the number of women and minority applicants to the Durham Fire Department (DFD). The problem is that the race and gender makeup of the DFD is not representative of the City of Durham community. The

black, female, and Hispanic populations of the City of Durham are 41.0%, 52.5%, and 14.2%, respectively. The unrepresented black, female, and Hispanic makeup of the DFD is 22.7%, 3.9%, and 2.0%, respectively. The reason it is a problem is that city leaders, the community, and members of the department would like the diversity of the community to be reflected as best as possible in the fire department as well as other city departments.

Based on feedback I have received, many people have misinterpreted the intent of the paper, and I want to avert any rumors. The intent is to increase the number of applications from women and other minority groups. That does not mean lower standards or fill quotas. In fact, women and other minority groups in the fire service universally object to lowering standards and using



THE SPARK APRIL-MAY EDITION

Continued from pg. 2

quotas.

Open houses used to be required to apply for the job, and as a training officer I attended open houses and noticed the attendees were almost all white males. If 84% of the open house attendees were white males, I expected that 84% of the recruits would be white males, and that is close to what happened. If open house attendees were 50% white males and 50% black males, we would expect to have an academy with 50% white males and 50% black males without lowering standards or filling quotas. You can add women, Hispanic, Asian, Native American, etc.. in any distribution percentage that you like, but my belief is that our applicant pool statistics, not quotas, should drive our hiring statistics. In order to increase hiring of qualified women and minorities there must be an increase in the number of applications from them. The DFD does not have a recruiting plan aimed at increasing applications from underrepresented groups, which is why I am doing the research to find out how best to accomplish getting qualified applicants.

The DFD is a fire service leader in representation by black males due to the efforts of the Bull City Firefighters. I was not aware of that until I started the paper. Many of my perspectives have changed due to the research I have seen and conducted. I understand many of the concerns that have been voiced because I have felt them too. I hope the above explanation alleviates at least two concerns (standards and quotas). I do believe there is a need for greater diversity, but I do not have the space in this article to discuss all the merits, limitations, and complexities associated with this topic. Maybe I will expand on this topic in the next edition of the Spark. Alternatively, you can read the research paper and pick up some different perspectives just as I did.

From the Desk of Assistant Chief of Operations Hall

After having just returned from FDIC in Indianapolis I sat down to write this article for the Spark and thought about the topics that were fresh in my mind, the classes that I attended and how I could share my excitement with you. This was my first time attending FDIC and I must say that it was quite an amazing experience. The classes there are taught by the leading instructors in the profession and the show floor is



enormous, encompassing the Indianapolis civic center and the Lucas Oil stadium. Chief Bobby Halton gave the opening remarks in the general session and spoke about loyalty and selfless service. It would be well worth your time of going on the Fire Engineering web site and watching these opening remarks. There were other motivating speeches that you can view as well, such as keynotes by Eric Roden, Battalion Chief Milwaukee, WI and George Healy, Deputy Chief FDNY. Steve Kerber was given the instructor of the year award for the work that he has been doing with UL and the “transitional attack”. Captain Richard Ray taught at FDIC again this year, his third year teaching on engine company operations. It is always refreshing to network with other professionals in our field and share ideas and learn new perspectives and possible suggestions for strategies and tactics. I know that a trip of this magnitude is not possible for everyone but please remember that there are opportunities available and I encourage you to consider upcoming events such as SAFRE (South Atlantic Fire Rescue Expo) in Raleigh or Firehouse Expo in Baltimore. These are great opportunities to stay abreast of the current trends in the fire service as well as spending time with other professionals in our field. On another note many of you have heard me say that we should recognize our outstanding employees. Many times we openly thank our personnel in open departmental meetings or e-mails but we should make an effort to openly give credit to our personnel when it is due. We should be proud to publicly recognize our personnel for their efforts and hard work. Please be sure to take time to nominate worthy employees for the seven stars recognitions that are awarded each month. One such recognition that deserves mentioning is Captain Travis Melvin receiving the 2014 Durham Jaycees Outstanding Young Public Servant award, please see below.

Fire Captain Earns Honor

Durham Fire Captain Travis Melvin has received the 2014 Durham Jaycees Outstanding Young Public Servant award. The Durham Jaycees is an organization of young professionals dedicated to leadership and development through community service. Melvin’s work scouting station locations, researching response reviews, influencing how the department responds to different locations, and collaborating with the 911 communications center earned recognition as an Outstanding Young Public Servant. He became a City of Durham Firefighter in June 1994 and promoted to a Captain July 2013.

Continued from pg. 3

From the Desk of Assistant Chief of Training Bunnell



In our profession, we all understand the importance of training. We spend 13 weeks in basic fire training, combined with another 17 weeks of EMS, just to get on the truck. After that, the continual training begins for our career. Training is the tool we use to sharpen our skills for the daily battles we fight.

I remind you of this to bring out a point. If we do not document training, it did not happen. After running reports on DFD training hours, some of our training records showed that personnel had completed less than 36 hours of training in the past year. Over the course of an entire year, we should have trained for more than 36 hours. Undocumented training may seem like a minor issue, but in reality, it can be very costly to employees and their families.

The NC State Firemen's Association and the Firefighter/Rescue Squad Pension Fund require a minimum of 36 training hours to be certified as a firefighter. A firefighter with less than 36 training hours is not eligible for any benefits that either organization offers. Also, if a firefighter with less than 36 training hours dies in the line of duty, there will be no death benefits paid to his or her beneficiary.

Supervisors, please document all training that you and your employees do while on duty. Employees attending training away from the fire station should report that training to immediate supervisors and should also provide documentation for their personnel and training files.

I know we all agree that the Durham Fire Department is held in high regard. We do not want to contribute to anything that would reflect negatively on our department and that would adversely affect employees.

Thanks for your assistance in this matter.



Fast Facts about the container structure for the burn building.

- The delivery date is May 5.
- The project is well underway, much of the fabrication work has been completed (burn chambers will be inserted into the containers this week).
- Project will be prepared for paint next week.
- We're on schedule for delivery Monday May 5th

THE SPARK APRIL-MAY EDITION

It's official. Windows XP support has been pulled off of life support.

by Michael Greitzer

What do we do now?

It's time to start "Spring Cleaning." Now is a great time to start de-cluttering your computer and start the process of moving important files from your local computer to the network, drive H. This will ensure that your important documents are being backed up nightly.

- I recommend creating a folder on your H: Drive and call it W7Backup.
- Place your important documents in this folder for easy recovery post upgrade.
- **Best Practice** would be to store your **important data** on your H: Drive.

If your hard drive fails prior to this upgrade your data may not be recoverable.

In the upcoming months I will be stopping by our various Fire Stations to upgrade (wipe and replace) XP to Windows 7. This process can take anywhere between 1 to 3 hours, depending on the number of files that need to be transferred from the old hard drive to the new hard drive.

Along with Windows 7 each computer will also be receiving Office 2010.

If you have any questions please feel free to contact me via email

Michael.Greitzer@durhamnc.gov or at ext. 19227.



Welcome Donnie

Donnie Bailey joined the DFD March 31, 2014 as the new Facilities Maintenance Technician and will be assisting Roger Thomerson.

Captain Travis Melvin Receives Durham Jaycees Outstanding Young Public Servant Award

by Sierra Mckoy



Here at the Durham Fire Department we're proud that "we do more than fight fires" and Captain Travis Melvin's work is a perfect example of the *more* that our people accomplish. Tuesday, April 8 Melvin received the 2014 Durham Jaycees Outstanding Young Public Servant award at the Thomas Center on Duke's West Campus.

The Durham Jaycees is an organization of young professionals who are dedicated to leadership and development through community service and they have been serving the community since 1938.

Melvin's work scouting station locations, researching response reviews, influencing how the department responds to different locations, and collaborating with the 911 communications center has got him recognized as an Outstanding Young Public Servant. He became a City of Durham Firefighter in June 1994 and promoted to a Captain July 2013.

It's Back



Softball Tournament

Hosted by Chapel Hill Firefighters Association

Benefiting the NC Jaycees Burn Center at UNC Hospital

May 30th, 31st and June 1st 2014

\$150 Entry Fee Per Team

Double Elimination

Registration Deadline May 1st 2014

FEE AFTER DEADLINE \$200

Fields provided by Town of Chapel Hill Parks and Recreation

If interested, contact Capt. David Swain.



Hazmat Updates

by Carol Reardon

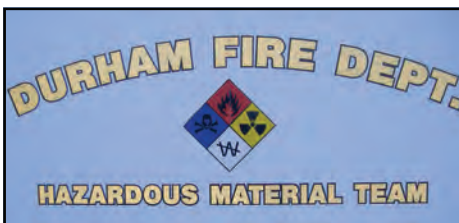
B shift Hazmat team members have started a new program where the Team members rotate from Engine 3 to Engine 13 for shifts to better prepare and train with the assigned Equipment on Hazmat 13. With the incorporation of the advanced equipment and the amount of training required to become better proficient with the equipment the individual attention provided has been beneficial. All members will continue to rotate between the stations during the next few months.

Recent Hazmat Responses! B shift Hazmat Team members assisted with an investigation of an unknown substance in the waterway behind 500 Cobb Street. Crews responded to callers reporting a blue substance in the waterway. Hazmat team members responded and obtained samples for testing on scene. The 360 ID was utilized to identify the product. The product was determined to be non toxic and non poisonous after completely the sampling and identification.

Remember to complete all CO forms when responding to CO alarm activation calls. Return all forms, completed and signed to the Hazmat Coordinator – Captain Richard Ray.

Remember to complete the Calibration of your gas meters on the first day of each month! Ensure that you are utilizing the proper calibration gas and that your calibration gas has not expired. Expired gas may be used for bump testing only! Please contact your Hazmat team members if you have any questions regarding Calibration or Bump Testing! We are always here to assist you with questions or concerns. Please contact the Hazmat team coordinator for ordering Calibration gas.

With the start of the growing season, a product that you may come into contact with is Anhydrous Ammonia a pungent gas with suffocating fumes that is used as a fertilizer. This month I will discuss Ammonia or Anhydrous ammonia (the absence of water) and the risk associated with accidental releases. NH₃ is a colorless liquefied gas that is free of water, which gives it a high affinity for water. Thirteen hundred gallons of ammonia vapor will dissolve in only one gallon of water. If caught in the area of a release you will not want to stay due to the very sharp and intensely irritating odor. Ammonia gas is lighter than air and is liquefied by pressure. It has an auto ignition temperature of 1,204 degrees F and is flammable at the range of 16-25%. Ammonia is not classified as a flammable gas due to the LEL being 16 not 13 and that flammable range is 10 percentage points and not the 12 required. This does



not mean that it won't burn. It does and it has injured and killed people. The US Department of Transportation has classified ammonia as a class 2.2 non-flammable gas. Not only will NH₃ burn but it is classified as a caustic liquid (corrosive)

and also a poison gas in many parts of the world. In the US it is classified by manufacturers as flammable, toxic and corrosive. When released, the liquid ammonia will return to a gas state at an expansion rate of 850 gallons of ammonia gas for every gallon of liquid.

Mild exposure to NH₃ will cause irritation to the eyes, nose and lung tissue. Once entering the lungs and being exposed to the moisture in the lungs, this will cause a severe reaction. The exposure will actually produce ammonium hydroxide, which will cause suffocation during prolonged exposure. Damage to the eye can be immediate and severe due to the eye being made up of mostly water. The ammonia extracts the fluid from the eye destroying the eye tissue and cells in minutes. Any contact in the eye requires a quick response. Immediately flush the eyes with copious amounts of water. Remove contacts and keep the eye open. Continue to flush the eye for 15 minutes and then seek medical attention. NH₃ is a very cold liquid and can cause serious thermal burns very quickly. There is no protective clothing to protect from the severe cold. When clothes have been frozen due to an exposure they may be released utilizing an application of water. Wet the body and clothing thoroughly and remove them, do not cover the burns. Do not apply any first aid product to the burns this will only cause deeper burns. Oxygen has been proven to be an effective treatment for persons that have become overcome with fumes and stopped breathing. Start by removing the patient from the environment and removing the clothing and continue irrigation. Utilize 100% O₂ with a BVM for the rescue breathing, while keeping the patient warm to prevent shock. For the patient who has the throat or nose effected encourage the patient to drink some type of citrus drink such as fruit juice or lemonade. The acidity will counteract some of the affect of the anhydrous ammonia.

Responding to an emergency presents many different challenges to the emergency responders. Level A fully encapsulated suits with SCBA will be required.

Continued from page 8

Ammonia is colorless, so there may be no visual indications where the gas is. Turnout gear does not provide protection due to the vapors seeking out moisture. SCBA will protect the respiratory system of the responder. All efforts should be made to avoid contact with the vapors and liquid. The fog stream can be used to dissolve the ammonia gas from the air for protecting victims that may be in harm's way. After the emergency decontamination, all efforts to contain the runoff should be attempted. Theft of anhydrous ammonia for clandestine purposes has resulted in numerous leaks, injuries and deaths. The valves of the containers storing the product have been left open, improper hoses and containers used in the illegal transfer are used and locks broken to protect the ammonia. The stolen ammonia will attack the brass fittings

which will cause leaks and then the product will be transported in dangerous conditions such as vehicle trunks. This can present a dangerous situation for the responder during an accident situation.

In conclusion, emergency responders must utilize proper procedures and equipment to avoid injuries and death when responding to an accidental release. Size up the emergency situation and identify what happened? Are lives and the environment at risk? What needs to be done next? What stage of the event is happening now? Answer these questions in order to prioritize which actions to take and determine what the initial response will be.

Reference: EPA, Chemical Safety Alert for Anhydrous Ammonia Theft



B-Shift Engine 5, Ladder 6, and Engine 11 work an extrication. Picture by Julian Harrison

Chaplain's Corner Easter Week

by Shawn Field

At the time of the writing of this article, we are in the middle of Easter Week. So I thought it might be somewhat timely to answer the question: What is this all about? What is this whole Christian tradition of Easter? As usual, this will not be an exhaustive study of the tradition, but merely an overview.

I did a quick internet search on the term Easter and found very little information. Most of the sites I found simply described the tradition, or holiday, itself. One site, however, did say that the term was adopted from a pagan name for a goddess whose festivals (called Eastron) ushered in the spring season and signified the rising of the sun, new beginnings and new life. Of course, this fits in well with the meaning of Easter for Christians – the rising of the Son, new beginning and new life.

The Easter season for some begins with Lent which is a period of fasting and/or sacrifice for a 40 day period leading up to Easter Day. Palm Sunday is the Sunday before Easter. This is a time of remembrance of the Day that Jesus made his triumphal entry into Jerusalem. The people laid palm branches in front of him along the path that he was travelling. Palm branches in that day represented triumph and victory. The Hebrew people were under the understanding that Jesus was their promised Messiah and that He would bring them political victory over their enemies as their king. Of course, as we would see later, His kingdom and victory would be very different from what they were expecting.

Good Friday is the next landmark holiday that we recognize in this season. Of course there were many other things that happened in the week prior. Jesus was accused of wrongdoing, betrayed by one of his own and captured by



the authorities. He stood trial many times. Some were before the religious leaders and some before the legal authorities. He was found guilty by both of either blasphemy or treason. What we refer to as Good Friday is the day that Jesus was killed by crucifixion, taken down from the cross and laid to rest in a tomb that was sealed by a large stone rolled across the entrance.

What we celebrate as Easter Sunday is the day that Mary went to the tomb, found that the stone had been rolled away and found the tomb to be empty. She ran and told the disciples who followed her back to the tomb and found that she had been telling the truth. The disciples left then two angels appeared to Mary, who had remained behind, and declared to her that Jesus had risen from the dead as He said He would. And so this is why, according to what was written in the second paragraph of this article, the name Easter is appropriate for this holiday whereby Christians celebrate the resurrection of Jesus. As the original pagan festival celebrated the rising of the sun, so Easter now celebrates the rising of the Son. As the original pagan festival celebrated new beginning and new life, so Easter celebrates the new beginning and new life that Jesus offers those who follow Him. And that is the basic meaning behind what we now refer to as the Easter season.

Here are some recent prayer requests:

Ret. Capt. Barry Shuler – father passed away

Josh Shumate – medically retired

Josh Sloan – grandfather passed away

Ret. Driver K.W. Roberts – recovering from hip surgery

Fire Marshal Eddie Reid – mother in law passed away

Ret. Driver Velton Thompson – passed away

Congratulations New Promotions

Wayne Seaman– Fire Inspector



Barber Shop Quartet

Departures

John Archer
Josh Shumate
Bruce Lynch

The Next Spark Deadline

June 12

Kentington House Burn Training

